## A Cipher Manual in Gray August 1

Both sides in the American Civil War recognized the importance of signaling and signals security. Both had centralized control over many aspects of this vital activity.

David W. Gaddy, who established the Center for Cryptologic History at NSA in 1989 and was its first chief, was an expert on Civil War cryptology. As a native of North Carolina and an NSA employee, he had developed particular expertise in Confederate signaling and cryptology, though, unfortunately, he published little about it during his lifetime. He did leave behind a half-finished manuscript from which this article is taken.



Edward Porter Alexander; we do not have a photograph of his brother, James

James H. Alexander, whose brother, E. Porter Alexander, founded the Confederate Signal Corps, wrote a letter in 1888 recalling that he had, on his brother's instruction in the spring of 1862, drawn up a circular on the use of the Vigenere cipher by communicators in the Confederate forces. This was taken by the Secretary of War and issued as a small pamphlet. The circular and pamphlet "was issued confidentially to the officers newly appointed for signal duty...."

Alexander's recollections were confirmed by an official report from Secretary of War George A. Randolph to President Jefferson Davis in August 1862. He informed Davis

that "For the purpose of systematic instruction a confidential pamphlet has been prepared by a member of the [signal] corps and printed with due precaution to avoid publicity." Randolph also assured Davis that no harm would be done if the pamphlet were to fall into Union hands "as it contains the principles of the art merely, and does not disclose the key to any signal or cipher."

No copies of this pamphlet are known to survive.

Gaddy noted that there were "extravagant" claims about the pamphlet, for example, that it was the world's first signal manual. He explained that it did predate by two years the manual compiled by Major Albert J. Myer, founder of the Federal Army's Signal Corps, and offered his opinion that the Alexander pamphlet at least "was the first printed set of cipher instructions in U.S. history."

502 caption: a portrait photograph of a bearded Confederate officer.